IMPROVED METHOD OF AND APPARATUS FOR A MULTI-STAGE BOUNDARY LAYER ENGINE AND PROCESS CELL

ABSTRACT

[00114] A multi-staged boundary layer engine and process cell, (based on the effect known as adhesion and viscosity) which achieves high thermal efficiencies and high mechanical power output for use in the power generation, geothermal, energy recovery, solar, transportation, hydrogen production, desalinating water and hydroelectric fields. The design is novel with a dovetail attachment of the disc packs, allowing lower stress and allowing the use of next generation materials such as ceramics, composites and nanocomposites to improve the maximum temperature and the maximum RPM of the engine, thereby producing more horsepower and torque. In addition, this invention includes multi-stage vacuum, an external combustion chamber and condenser stages to improve the vortex flow through the primary disc pack cell. This engine will also encompass a closed loop cycle for ultimate efficiencies. This invention will also include the use of catalysts and/or electrical polarities applied to the disc pack and the disc pack/casing respectively to achieve low NO_X and also to achieve process cell capability for applications such as desalinization and hydrogen generation.